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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/522,902 | 10/19/2005 | Kokichi Sugihara | Q85926 | 6660 |

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SUGHRUE-265550
2100 PENNSYLVANIA AVE. NW
WASHINGTON, DC 20037-3213

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| EXAMINER |
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THANGAVELU, KANDASAMY

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| ART UNIT | PAPER NUMBER |
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2123

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| MAIL DATE | DELIVERY MODE |
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01/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/522,902 | | SUGIHARA ET AL. | |
| | Examiner | | Art Unit | |
| | Kandasamy Thangavelu | | 2123 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/1/05; 10/19/05; 6/12/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-8 of the application have been examined.

Information Disclosure Statement

2. Acknowledgment is made of the information disclosure statements filed on February 1, 2005, October 19, 2005 and June 12, 2007 together with a list of patents and papers. The patents and papers have been considered.

Drawings

3. The drawings submitted on October 19, 2005 are accepted.

Claim Objections

4. The following is a quotation of 37 C.F.R § 1.75 (d)(1):

The claim or claims must conform to the invention as set forth in the remainder of the specification and terms and phrases in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

5. Claims 1, 2, 4 and 6 are objected to because of the following informalities:

Claim 1, Page 37, Line 2, "and returns to the searching step" appears to be incorrect and it appears that it should be "and returning to the searching step".

Claim 2, Lines 3-4, "one of the plurality of circle" appears to be incorrect and it appears that it should be "one of the circles".

Claim 4, Page 39, Line 7, "has the insertion trial circle is set" appears to be incorrect and it appears that it should be "has the insertion trial circle set".

Claim 6, Line 4, "one of the plurality of circle" appears to be incorrect and it appears that it should be "one of the circles".

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This is because the claims use indefinite terms making the claims indefinite.

7.1 Claim 1, Lines 25-29 state, "a first search controlling step setting a new target circle which is slightly smaller than the present one and has the insertion trial circle and returns to the

searching step if all the insertion trial circles have been inserted in the target circle”. This limitation is not understood.

The target circle had one of the circles protruding and it was treated as insertion trial circle. When the inserting step inserted the insertion trial circle into the target circle, it may be successful or may not be successful. What is meant by, “setting a new target circle which is slightly smaller than the present one and has the insertion trial circle”? How do you select the new target circle if the insertion trial circle does not fit into the previous target circle? What is meant by “returns to the searching step if all the insertion trial circles have been inserted in the target circle”? How do you get from one insertion trial circle, “all the insertion trial circles”? Doesn’t the new target circle have any circle protruding from it?

7.2 Claim 3, Page 38, Lines 1-4 state, “the operation returns to the searching step after determining a new target circle which is of an intermediate size between the including circle and the present target circle and which has the insertion trial circle”. What is meant by “a new target circle ... and which has the insertion trial circle”? Doesn’t the new target circle have any circle protruding from it?

7.3 Claim 4, Page 39, Lines 4-8 state, “first search controlling means in which in a case where all the insertion trial circles have been inserted in the target circle, a new target circle which is slightly smaller than a present one and has the insertion trial circle is set, and the search by the searching means is then effected”. This limitation is not understood.

The target circle had one of the circles protruding and it was treated as insertion trial circle. When the inserting step inserted the insertion trial circle into the target circle, it may be successful or may not be successful. What is meant by, “a new target circle which is slightly smaller than a present one and has the insertion trial circle is set”? How do you select the new target circle if the insertion trial circle does not fit into the previous target circle? What is meant by “a new target circle which is slightly smaller than a present one and has the insertion trial circle is set, and the search by the searching means is then effected”? Doesn't the new target circle have any circle protruding from it?

7.4 Claim 7, Lines 3-7 state, “causes the search by the searching means to be effected after determining a new target circle which is of an intermediate size between the including circle and the present target circle and which has the insertion trial circle”. What is meant by “a new target circle ... and which has the insertion trial circle”? Doesn't the new target circle have any circle protruding from it?

7.5 Claim 8, Page 39, Lines 4-8 state, “first search controlling means in which in a case where all the insertion trial circles have been inserted in the target circle, a new target circle which is slightly smaller than a present one and has the insertion trial circle is set, and the search by the searching means is then effected”. This limitation is not understood.

The target circle had one of the circles protruding and it was treated as insertion trial circle. When the inserting step inserted the insertion trial circle into the target circle, it may be successful or may not be successful. What is meant by, “a new target circle which is slightly

smaller than a present one and has the insertion trial circle is set”? How do you select the new target circle if the insertion trial circle does not fit into the previous target circle? What is meant by “a new target circle which is slightly smaller than a present one and has the insertion trial circle is set, and the search by the searching means is then effected”? Doesn’t the new target circle have any circle protruding from it?

7.6 Claims rejected but not specifically addressed are rejected, because of their dependence on rejected claims.

8. Claims 1-3 are rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are:

8.1 Claim 1, Page 37, Line 5-8 state, “wherein the including circle is made gradually small by repeatedly executing the target-circle defining step, the searching step, the inserting step, and the first search controlling step”. If the steps are repeatedly executed, when does the method exit and under what conditions? You cannot be executing a series of steps forever.

8.2 Claims 2 and 3 are rejected because they depend on rejected claim 1.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 1-3 are rejected under 35 U.S.C. 101 because the claimed inventions are directed to non-statutory subject matter.

10.1 Claim 1 states, “A method of calculating an outer diameter of a wire packing ..., the method comprising:

an including-circle assuming step of assuming an including circle ...;

a target-circle defining step of determining a target circle ...;

a searching step of setting the circle protruding from the target circle ...;

an inserting step of inserting the insertion trial circle ...; and

a first search controlling step setting a new target circle ...,

wherein the including circle is made gradually small by repeatedly executing the target-circle defining step...”.

While the method executes several steps forever, it does produce any useful, tangible and concrete results. Therefore, the claim is not patentable under 35 USC 101.

Claims 2-3 depend on claim 1 but do not produce any useful, tangible and concrete results. Therefore, these claims are not patentable under 35 USC 101.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kandasamy Thangavelu whose telephone number is 571-272-3717. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez, can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

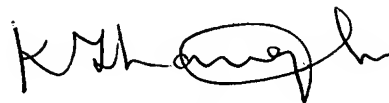
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'K. Thangavelu', with a circular flourish at the end.

K. Thangavelu
Art Unit 2123
December 22, 2007